



Gyanmanjari
Innovative University

Course Syllabus
Gyanmanjari Institute of Management Studies
Semester-1 (BBA)

Subject: Database Management System – BBAFT11302

Type of course: Major (Core)

Prerequisite:

Basic Knowledge of Computer Programming. Any student who has studied and passed 12th Standard Examination in Science or General stream with English as one of the subjects from any recognized Board can join BBA Program.

Rationale:

Database is an integral part of real life application system. The course will enable student understand the different issues involved in the design and implementation of a database system. Student will learn the physical and logical database designs, database modeling, relational, hierarchical, and network models. Student will learn to use data manipulation language to query, update, and manage a database. Student will understand essential DBMS concepts such as: database security, integrity, concurrency, storage strategies etc. The students will get the hands on practice of using SQL and PL/SQL concepts.

Teaching and Examination Scheme:

Teaching Scheme			Credits	Examination Marks			Total Marks
CI	T	P		C	SEE	CCE	
			MSE			ALA	
4	0	0	4	100	30	70	200

Legends: CI-Class Room Instructions; T – Tutorial; P - Practical; C – Credit; SEE - Semester End Evaluation; MSE- Mid Semester Examination; V – Viva; CCE-Continuous and Comprehensive Evaluation; ALA- Active Learning Activities.

4 Credits * 25 Marks = 100 Marks (each credit carries 25 Marks)

SEE 100 Marks will be converted in to 50 Marks

CCE 100 Marks will be converted in to 50 Marks

It is compulsory to pass in each individual component.



Continuous Assessment:

(For each activity maximum-minimum range is 10 to 5 marks)

Sr. No	Active Learning Activities	Marks
1	QUIZ MCQ Test will be conducted on Moodle (10 MCQs from each module).	10
2	Entity-Relationship Diagram: Faculty will provide topic to the students and give them to Sketch ER Diagram on that topic.	10
3	Database Implementation Instruct students to build a small database using DBMS software (e.g., MySQL, PostgreSQL, XAMPP). They can create Database, tables, insert data, and perform Create, Read, Update, and Delete (CRUD) operations to understand database management practically.	10
4	Assignments Faculty will provide a Some topic and students write in their book with solutions.	10
5	Case Study Faculty will provide a topic and Idea related to case study. Students will prepare the solutions on the given case / situation in a group of three and Upload it to Moodle.	10
6	Attendance	10
7	Student's Preference	10
Total		70

Course Content:

Sr. No	Course content	Hrs	% Weightage
1	Introduction Database system and it's architecture: Data Abstraction, Data Independence, Three schema architecture, Database Users, File system vs. DBMS, Data Definition Language (DDL), Data Manipulation Language (DML). Data models: Entity-relationship model, network model, relational and Object oriented data models, integrity constraints.	18	25
2	Entity Relationship Diagram ER Model, ER Diagrams, Entities, Attributes, Relationships, Constraints on relationship, sample ER diagrams. SQL Concepts: Introduction of SQL, Role of SQL, SQL schema, Features of SQL, DDL and its commands, DML and its commands.	12	25

3	Relational database Design Introduction ,sample database using relational model, Relation: A Table, Keys, Types of Keys, data Integrity Normalization: Functional dependancy,1NF,2NF,3NF	18	25
4.	Database Security: Introduction, Security objectives, DBA. DRL/DSL in SQL : SELECT clause, Aliasing in SQL/Naming in SQL, Ordering query results-ORDER clause	12	25

Suggested Specification table with Marks (Theory):100

Distribution of Theory Marks (Revised Bloom's Taxonomy)						
Level	Remembrance (R)	Understanding (U)	Application (A)	Analyze (N)	Evaluate (E)	Create (C)
Weightage	20%	30%	30%	10%	10%	-

Note: This specification table shall be treated as a general guideline for students and teachers. The actual distribution of marks in the question paper may vary slightly from above table.

Course Outcome:

After learning the course the students should be able to:	
CO1	Recognize the various Concepts of Database Management Systems and models.
CO2	Given a problem statement, identify the entities and their relations and Draw an E-R diagram and design database applying normalization.
CO3	Learn SQL and its features and to create database, tables, DDL and DML queries.
CO4	Apply and relate the concepts of relation: tables, and different keys in DBMS.
CO5	Recognize the purpose of query to retrieve a data from database using select cause and order by.



Instructional Method:

The course delivery method will depend upon the requirement of content and need of students. The teacher in addition to conventional teaching method by black board, may also use any of tools such as demonstration, role play, Quiz, brainstorming, MOOCs etc.

From the content 10% topics are suggested for flipped mode instruction.

Students will use supplementary resources such as online videos, NPTEL/SWAYAM videos, e-courses, Virtual Laboratory

The internal evaluation will be done on the basis of Active Learning Assignment

Reference Books:

Abraham Silberschatz, Henry F. Korth, S. Sudarshan, Latest Edition, *Database System Concepts*, McGraw-Hill.

R. Elmasri and S. Navathe, Latest Edition, *Fundamentals of Database Systems*, Pearson

C J Date, Latest Edition, *An introduction to Database Systems*, Pearson

Hoffer , Ramesh, Topi, Latest Edition, *Modern Database Management*, Pearson

J. D. Ullman, Latest Edition, *Principles of Database and Knowledge – Base Systems*, Computer Science Press

Martin Gruber, Latest Edition, *Understanding SQL*, BPB

